

U.S.S.N. 10/773,916

Filed: February 6, 2004

AMENDMENT AND RESPONSE TO OFFICE ACTION**Remarks**

New claims 18 and 19 are directed to a recombinant expression system, and a method for enhancing production of polymers containing 4-hydroxybutyrate, which involve a host having stably incorporated into the genome, a gene encoding a polyhydroxyalkanoate synthase or 4-hydroxybutyryl-CoA transferase, and a feedstock containing a substrate for the enzymes selected from carbohydrates, succinate, 4-hydroxybutyrate, α -ketoglutarate, and amino acids, where the enzyme expression and substrate are in a sufficient amount to produce polyhydroxybutyrate-co-poly-4-hydroxybutyrate or poly-4-hydroxybutyrate.

Support for claims 18 and 19 can be found on page 7, line 30 to page 10, line 6; page 10, line 21 to page 11, line 24; the section entitled "Pathway to 4-hydroxybutyryl CoA from α -ketoglutarate" starting on page 11; the section entitled "Pathways to 4-hydroxybutyryl-CoA from arginine, putrescine, glutamine, and proline via GABA" starting on page 13; and the section entitled "Pathway to 4-hydroxybutyryl CoA from succinate" starting on page 17.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 2, 5-7 and 12-17 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection to the extent that it is applied to the claims as amended.

Claims 2, 6, 7, 12, and 13 have been amended to recite "4-hydroxybutyryl-CoA transferase" instead of "4HB-CoA transferase".

Claims 12 and 16 have been amended to recite "4-hydroxybutyrate" instead of "4HB".

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Claim 5 has been amended to recite "polyhydroxyalkanoate synthase" instead of "PHA synthases".

Claims 14-17 have been amended to correct antecedent basis.

Double Patenting Rejection

Claims 1-17 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 and 1-13 of U.S. Patent No. 6,316,262 and U.S. Patent No. 6,689,589, respectively.

Enclosed with this response is a Terminal Disclaimer to obviate the double patenting rejection over U.S. Patent No. 6,316,262 and U.S. Patent No. 6,689,589 and three statements under 37 C.F.R. § 3.73(b).

Respectfully submitted,



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Date: June 14, 2005

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7

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